

WHAT IS CLAIMED IS:

1. A printing apparatus to which an expendable
having a memory for storing and holding information
that pertains to a use state, and a recording agent
5 used in a print process is detachably attached,
comprising:

memory access means for making read and write to
the memory in the expendable; and

- 10 setting means for setting inhibition/permission
of data write with respect to an address space in the
memory.

2. The apparatus according to claim 1, wherein said
memory access means and the memory are connected via a
serial communication line.

- 15 3. The apparatus according to claim 1, wherein said
memory access means and the memory are connected via
non-contact communication means.

4. The apparatus according to claim 1, further
comprising:

- 20 detection means for detecting an amount of an
expendable agent in the expendable; and

expendable agent update means for writing the
expendable agent amount detected by said detection
means at a predetermined address position of the memory
25 via said memory access means, and

wherein said setting means sets to inhibit write
to the predetermined address position when said
detection means detects that the remaining amount of
the expendable agent becomes not more than a
5 predetermined amount.

5. The apparatus according to claim 1, wherein one
or a plurality of predetermined amounts of the
expendable agent are determined in advance, when each
of the predetermined amounts has been reached, data
10 indicating that the predetermined amount has been
reached is written in an address area corresponding to
that predetermined amount at a different timing, and
write to the address area is set to be inhibited.

6. The apparatus according to claim 1, wherein the
15 memory in the expendable includes a management address
area which stores information indicating whether or not
write to an address that stores the use state is
permitted, and said setting means sets data stored at
the management address.

20 7. A printing apparatus comprising:

detaching/attaching means for detaching or
attaching an expendable having a memory capable of
setting a locking state for inhibiting data writing
with respect to at least a predetermined area in the
25 memory;

detection means for detecting state of the
expendable;

write means for writing result detected by said
detection means to the memory; and

5 locking state control means for controlling the
locking state of the memory on the basis of the result
of said expendable detected by detection means.

8. The apparatus according to claim 7, wherein the
data communication between said printer and said
10 expendable is made by wireless.

9. The apparatus according to claim 7, wherein said
detection means detects an amount of an expendable
agent in the expendable.

10. The apparatus according to claim 7, wherein, when
15 the amount of the expendable agent in the expendable
detected by said detection means reaches a
predetermined amount or one of a plurality of
predetermined amounts said write means, said write
means writes data, indicating that the amount of
20 expendable agent has reached to the predetermined
amounts, in said area of said memory, and said lock
state control means controls the memory so that the
area of the memory becomes locked state.

11. A method of controlling a printing apparatus to
25 which an expendable having a memory for storing and
holding information that pertains to a use state and a

recording agent used in a print process is detachably attached, comprising:

the memory access step of making read and write to the memory in the expendable; and

- 5 the setting step of setting inhibition/permission of data write with respect to an address space in the memory.

12. The method according to claim 11, wherein data communication with said memory in said memory access
10 step is performed by using a serial communication line.

13. The method according to claim 11, wherein data communication with said memory in said memory access step is performed in non-contact manner with said memory.

- 15 14. The method according to claim 11, further comprising the detection step of detecting a mount of expendable agent in said expendable,

 wherein, in said memory access step, the amount of the expendable agent in said expendable is written
20 to a predetermined address of said memory,

 and in said setting step, when the amount of the expendable agent detected in said detection step is less than a predetermined amount, write to the predetermined address of said memory is set to be
25 inhibited.

15. The method according to claim 11, wherein one or a plurality of predetermined amounts of the expendable agent are determined in advance, when each of the predetermined amounts has been reached, data indicating
5 that the predetermined amount has been reached is written in an address area corresponding to that predetermined amount at a different timing, and write to the address area is set to be inhibited.

16. The method according to claim 11, wherein said
10 memory has a management address area for storing information indicating that write to an address area for storing a use state is inhibited or permitted, wherein, in said setting step, the setting inhibition/permission of data write is performed
15 against to the management address area.

17. A method of controlling a printing apparatus having detaching/attaching means for detaching or attaching an expendable having a memory capable of setting a locking state for inhibiting data writing
20 with respect to a predetermined area in the memory, comprising the steps of:

the detection step of detecting state of the expendable;

the write step of writing result detected in said
25 detection step to the memory; and

the locking state control step of controlling locking state of the memory on the basis of the status of the expendable detected in said detection step.

18. The method according to claim 17, wherein data
5 communication between the printing apparatus and the memory is made by wireless.

19. The method according to claim 17, wherein, in said detection step, an expendable agent in the expendable is detected.

10 20. The method according to claim 17, wherein, when the amount of the expendable agent in the expendable detected in said detection step reaches a predetermined amount or one of a plurality of predetermined amounts, data indicating that the amount of expendable agent has
15 reached to the predetermined amount is written in an area of said memory in said write step, and, in said lock state control step, said memory is controlled so that the area of the memory becomes locked state.

21. An expendable which has a recording agent used in
20 a print process and is detachable from a printing apparatus, comprising:

communication means for communicating with the printing apparatus when said expendable is attached to the printing apparatus;

25 a memory for storing and holding information that pertains to a use state, and writing and reading out

data via said communication means when said expendable is attached to the printing apparatus; and

means for receiving information indicating permission/inhibition of write to said memory in units
5 of addresses via said communication means, and locking write to said memory.

22. The expendable according to claim 21, wherein said communication means is means for communicating with the printer via a serial communication line.

10 23. The expendable according to claim 21, wherein said communication means is means for communicating with the printer by wireless.

24. The expendable according to claim 21, wherein said memory has an address area for storing an amount
15 of expendable agent in the expendable,

wherein, when the amount of the expendable agent in the expendable is less than a predetermined amount or one of a plurality of predetermined amounts, write to the address area of said memory is set to be
20 inhibited.

25. The expendable according to claim 21, wherein said memory has address areas corresponding to a plurality of predetermined amounts of expendable agent, when the amount of expendable agent in the expendable
25 reaches a predetermined amount, data indicating that the amount of expendable agent reaches the

predetermined amount is written to an address area corresponding to the predetermined amount, and write to the written address area is set to be inhibited.

26. The expendable according to claim 21, wherein
- 5 said memory has a management address area for storing information indicating that write to an address area for storing a use state is inhibited or permitted.